



## *Hawaii Wetland Monitor*

### **The newsletter of the Hawaii Wetland Joint Venture**

Volume 2, Number 1 March 2008

*Hui ola hou i nā 'olokele*

#### **In this issue**

- 1 Pouhala Marsh Volunteer Program
- 2 Restoration Spotlight: Mana Plain
- 3 Funding Spotlight: Kure Atoll
- 4 Continuing Education Opportunities for Wetland Managers
- 6 Construction Company Fined for Wetlands Violation
- 7 Hawaii Wildlife License Plates
- 8 Resources and Training
- 9 Grants and Resources for Finding Funding

*Hawaii Wetland Monitor is compiled and edited by Christina Ryder and Shelley Kirk-Rudeen.*

#### **Pouhala Marsh Volunteer Program: A Model for Joint Venture Partners** Pauline Kawamata, The Hawaii Nature Center

Pouhala Marsh, located in the West Loch of Pearl Harbor, is the last remaining natural wetland habitat on O'ahu's south coast. The seasonal marsh dries up significantly during summer and fills again in rainy winter months. This 70-acre wetland is as a crucial habitat resource for the protection of several Hawaiian plant and animal species, including the endangered Hawaiian Stilt (*ae'o*).



Pouhala Marsh, once a part of the Waikele *ahupua'a* (watershed) in Ewa, was a thriving area for agriculture. Fishponds and taro patches flourished in Waipahu's natural springs. Both Kapakahi Stream and Waikele Stream drain into Pearl Harbor and feed the marsh. Following private ownership of the area in the late 19th to early 20th centuries, many fishponds were divided and converted into rice paddies. After rice production ended, most of the land was filled with trash, incinerator ash, and mangrove. In recent years, the marsh continued to drastically degrade through water pollution, alien plant invasion and development. As a result, there was an increased interest in restoring and protecting Pouhala Marsh.

In a combined effort with the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife (DLNR/DOFAW), U.S. Fish and Wildlife, City and County of Honolulu, and Ducks Unlimited, the Hawai'i Nature Center began monthly wetland restoration service projects in December 2001. Over 1,400 dedicated volunteers have logged in 6,754 hours of hard work restoring habitat and feeding areas for endangered wetland birds and creating teaching sites for the nature center's wetland educational programs. Volunteers continue to work on projects that include removing invasive pickleweed, cattail, mangrove and castor bean, as well as trash and debris.

The Pouhala Marsh restoration demonstrates several key elements that contribute to a successful volunteer program. These elements include:

**Educate:** Volunteers learn about the importance of the marsh and how their work is making a difference. Volunteers who can see and understand the impact of their work come back again and again.

**Adjust and be flexible:** Service projects are based on the size of the volunteer groups and ability of the volunteers. For example, a group from the Naval Station at Pearl Harbor can do more physical work than group of high school students. Adjusting the projects accordingly allows volunteers to leave with a sense of accomplishment.

**Be realistic with the time frame:** Because it can get very hot at the marsh, the work time is limited to no more than two hours. It is manageable and realistic for the volunteers and it keeps them from "burning out."

**Show appreciation:** Cold water, juice and small snacks are simple but great rewards for a hard day's work and are always appreciated by the volunteers. A personal thank-you at the end of the day, or a handwritten note or email for exceptionally hard work is greatly appreciated.

**Establish a core group of volunteers:** The Hawai'i Nature Center is very fortunate to have a dedicated crew of volunteers. Even if there are no groups scheduled to come to the monthly service projects, the core group of volunteers can be counted on come out and work.

For more information about the monthly Pouhala Marsh service projects, please send an email to [volunteer@hawaiinaturecenter.org](mailto:volunteer@hawaiinaturecenter.org). Volunteers really do make a difference at Pouhala Marsh!

## Restoration Spotlight: Mana Plain

Wetland restoration on the island of Kauai is a high priority for the recovery of endangered waterbirds due to its abundant supply of water, lack of introduced mongoose that prey on endemic waterbirds, and the presence of genetically pure Hawaiian Ducks (*Anas wyvilliana*).

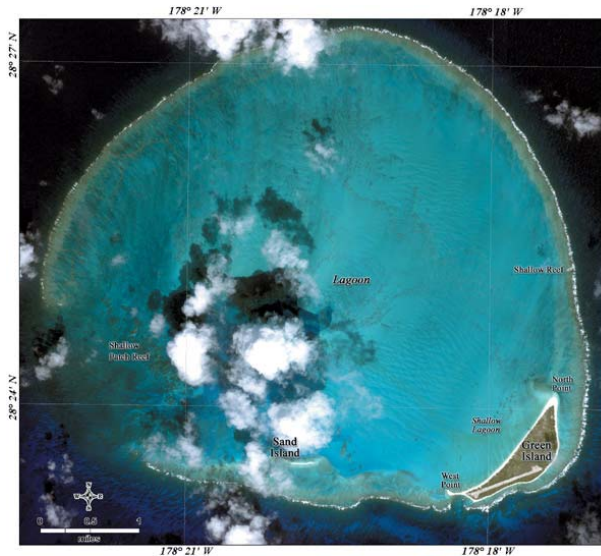
Historically the Mana Plain on Kauai's west side provided nearly 2,000 ac (800 ha) of wetland habitat and was once the largest wetland in the Hawaiian Islands. However, in 1923 the area was drained for sugar cane production, leaving only 200 acres of aquatic habitat comprised mostly of reservoirs and ditches. Prior to draining, Mana may have had the highest densities of Hawaiian Duck and Hawaiian Coot (*Fulica alai*) in the Islands.



Today a consortium of partners is working to restore wetland habitat at the Mana Plain. Partners involved with the preservation and restoration of Mana Plain include: the State of Hawaii DLNR Division of Forestry and Wildlife, State of Hawaii DLNR Division of Aquatic Resources, U.S. Fish and Wildlife Service, USDA Natural Resources Conservation Service, University of Hawaii, National Park Service-Rivers, Trails, and Conservation Assistance Program, non-profit organizations, and local corporations. In total this project aims to restore and enhance 120 acres of coastal palustrine emergent wetlands and mud flats and 15 acres of coastal strand and dune habitats. Restoration actions will support increased populations of migratory, wintering, and endemic waterbirds. Four of Hawaii's endemic waterbirds will directly benefit from restoration and include the Hawaiian Duck, Hawaiian Coot, Hawaiian Moorhen (*Gallinula chloropus sandvicensis*), and Hawaiian Stilt (*Himantopus mexicanus knudseni*).

In 2007 PCJV discretionary funds were used to begin developing engineering specifications for the Kawaiele Wetland, Phase I. These specifications considered the current and target topography and hydrology to create desired wetland habitats for resident and migratory waterbirds. Currently partners are soliciting funding for an engineering assessment for Phase II of the wetland restoration, which will include a hydraulics report with hydrogeological characterization, flood analysis and site water budget. Results of this assessment will be used to create construction specifications for the wetland restoration to ensure effective management of water and invasive vegetation. To aid in the design phase of this project the PCJV organized a meeting between mainland and island-based engineers and hydrologists with private companies and the U.S. Fish and Wildlife. This panel of professionals has been able to provide unprecedented technical assistance resulting in state-of-the-art project designs.

## Funding Spotlight: Conserving and Restoring the Biodiversity of the NW Hawaiian Islands - The Kure Atoll Restoration Project



Kure Atoll, at the northwest tip of the Hawaiian archipelago, is the world's northernmost coral atoll. Green Island, the atoll's only permanent island, is the State of Hawaii's most significant seabird sanctuary and the only state owned land within the newly established Papahānaumokuākea Marine National Monument. By collaborating with the Joint Venture the state of Hawaii DLNR/ DOFAW received \$400,000 from the USFWS coastal grants program to restore valuable wildlife habitat on this isolated atoll. Through this project, DLNR will restore 13 acres of critical seabird habitat by removing invasive

plants and improving habitat conditions for the potential reintroduction of the Laysan Duck. It will also restore 36 acres of marine intertidal habitat by removing marine debris and entanglement hazards, and 250 acres of marine sub-tidal coral reef habitat by removing marine debris. The Atoll provides nesting habitat for 17 seabird species, including species identified as "highly imperiled" or of "high concern" in the U.S. Seabird Conservation Plan for the Pacific Region, and listed as priority species by the North American Bird Conservation Initiative.

## Continuing Education Opportunities for Wetland Managers



Dr. Leigh Fredrickson's newly established non-profit, Wetland Management and Educational Services Inc. (WETMES), is coordinating several workshops to help natural resource managers learn more about wetland ecology. Dr. Leigh has been involved in wetland management since the early 1960s.

Each workshop is tailored to the specific needs of attendees. Instead of a "cookbook" approach, the workshops stimulate thinking appropriate for making wetland management decisions in highly modified systems. The foundation of this philosophy is based on decades helping managers, biologists, researchers, and students learn from each other in a vast array of wetland settings including montane, southern hardwood, tropical,

prairie pothole, parkland, boreal, riverine, estuarine, coastal, arid, and man-made or man-modified during wet and dry cycles. Dr. Leigh believes those in attendance are the experts on their specific areas, but can benefit from WETMES's experience with a wide an array of wetland conditions and management tools, and can also learn more about the huge challenge of decision-making in the highly modified wetland environments that now dominate Hawaii and the contiguous 48 states.

Field trips are an essential component for each workshop, and include viewing and discussion of both good and poor examples of management responses. In most cases workshop sites represent some of most intensively managed public and private wetlands in North America and those responsible for the hands-on aspects are available to describe and discuss their successes and failures.

Workshops begin with the basics essential to appreciate the complexity of wetland management. As the workshops develop the focus shifts to the application of management strategies and descriptions of case histories. Workshops are kept fresh by incorporating new information as it becomes available and as new questions arise. and by changing the staff responsible for different topics and workshops. Attendees can expect to meet other land managers with similar questions and concerns, see and discuss the results of management actions, meet some of the best managers in the business, and be exposed to a vast array of information in a classroom and field setting. To register for one of the below listed workshops contact Dr. Leigh at [wetmes@wildblue.net](mailto:wetmes@wildblue.net).

<b>Dates</b>	<b>Workshop Title</b>	<b>Where</b>	<b>Cost</b>
March 11-12	Abiotic Considerations for Successful Management	Missouri. Mingo Basin	\$350
April 8-9	Invertebrate Ecology and Management	Missouri, Mingo Basin	\$350
May 5-9	Waterfowl Ecology and Management	Missouri, Mingo Basin	\$600
August 27-28	Moist-soil Management for Biologists and Managers	Missouri, Mingo Basin	\$350
September 3-4	Moist-soil Management for Maintenance Staff	Missouri, Mingo Basin	\$350
September 22-26	Waterfowl Ecology and Management: A focus on management of temporary and seasonal wetlands.	South Dakota, Huron	\$600



## **Coluccio Construction Co. and Castle Family LLC fined for Oahu wetlands violations**

On January 31, 2008 the U.S. Environmental Protection Agency fined Frank Coluccio Construction Co. and Castle Family LLC a total of \$68,000 for filling sensitive wetlands adjacent to Hamakua Stream in Kailua, Oahu without federal permits.

“We will protect the Kailua wetlands from illegal filling and ensure it is restored to provide water bird habitat, flood storage, and protect the island’s coastal water quality,” said Alexis Strauss, water division director for the EPA’s Pacific Southwest region. “When wetlands are filled, these important ecological functions are lost. Any discharge of fill to wetlands or streams requires a federal permit.”

In response to complaints by Kailua residents, the U.S. Army Corps of Engineers informed Coluccio and Kaneohe Ranch Company, Ltd., the Castle Family LLC property manager, that Clean Water Act permits were required for the filling of wetlands. Under an agreement with Castle Family LLC, Coluccio had cleared wetland vegetation at the site to create a staging area for project equipment and materials staging.

In February 2005, the Hawaii Department of Health and EPA officials inspected the site and noted that large stockpiles of excavated soil and rock had been dumped into the wetland habitat, although neither company had obtained the required permit. Coluccio filled just under one acre of wetlands which are part of a larger system running from Kawainui Marsh to Kaelepulu Pond and the Pacific Ocean.

The EPA then ordered the companies to develop and implement a plan to remove the fill from the wetlands and restore the habitat with native plants and appropriate re-grading. The companies also must monitor the restoration site, evaluate its success, and submit annual reports to EPA for up to 5 years.

## **License Plates Benefit Wildlife**

The Hawaii Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) is pleased to announce the availability of the new DOFAW Specialty License Plate at all city and county motor vehicle licensing locations statewide. These specialty license plates feature the native ohia lehua blossom with an i'iwi, Hawaiian honeycreeper, and the words “Protect Our Native Species”. Proceeds from the sale of these license plates will go toward projects relating to Hawaii’s species of greatest conservation need and their affiliated habitats.

If you would like to purchase a DOFAW Specialty License Plate, please go to your local Satellite City Hall, complete the [application form](#), and surrender the Certificate of Registration for your vehicle. The cost for the new plate is \$30.50 and includes: (1) the new plate fee (\$25.00), (2) a plate replacement fee (\$5.00), and (3) registration emblem replacement fee (50 cents). Be aware that if your vehicle registration has expired or will expire within 45 days of the processing of the DOFAW plate replacement, the applicable

renewal fees and taxes will be accessed.

Your Satellite City Hall clerk will explain this to you when you apply or you can call 532-4325. DOFAW will receive **\$20.00** of the \$30.50 paid for the plate/decal program. Each year when you renew your vehicle registration, you will be charged an additional \$25.00 of which **\$20.00** will again go to support the protection of Hawaii's native species.

## Resources and Training

### PUBLICATIONS:

#### [Wetlands](#)

William J. Mitsch, James G. Gosselink  
Wiley, John & Sons, August 2007

This is the fourth edition of the premier book on wetland ecology and management. As reviewers attest, this book is the single most important book on wetlands and has educated a generation of ecologists, land use planners and water resource managers worldwide. The new edition answers the market's request for a smaller, more streamlined book by moving seven chapters on wetland-types to a support website, and better integrating core concepts from these chapters throughout the book.

#### [National Geographic Birding Essentials](#)

Jonathan Alderfer and Jon L. Dunn  
National Geographic 2007

Field Ornithologists Jonathan Alderfer and Jon Dunn have crafted a masterful guide, striking just the right balance of practical information and reader-friendly tone. Chapters discuss the pleasures of birding, equipment needed, how to read range maps, birds' physical features, how to identify birds, identification challenges, bird classification and suggested books and journals for building a fine birding library.

#### [Bird Species and Climate Change: The Global Status Report](#)

A report to World Wide Fund for Nature

This review, prepared by independent climate risk analysts [Climate Risk Pty Ltd](#), seeks to provide a global overview of current effects of climate change on birds as well as a picture of future impacts. It provides a scientific assessment of current research data, achieved by surveying hundreds of research articles and reports on the topic.

#### [Birder's Conservation Handbook; 100 North American birds at risk](#)

Jeffrey V. Wells  
Princeton University Press, 2007

Most of the book is made up of individual species accounts for the 100 species considered most at risk, according to assessments determined by the major bird conservation initiatives and organizations. Each profiled species has an account containing up to four pages of information that outlines the species' status and distribution (along with a unique hemispheric range-map), ecology, threats, conservation actions now in motion, and conservation needs for the future. The species accounts are preceded by several important

chapters that describe how birds serve as environmental indicators, an overview of the state of North American bird populations, the major issues impacting North American birds, and the state of North American bird conservation.

## TRAINING/ CONFERENCES

### **Quantifying the Economic Value of Habitat Conservation: Application of a Benefits Estimation Toolkit**

April 3-4, 2008, Washington DC.

The purpose of the Defenders of Wildlife workshop is to present to participants a user-friendly toolkit that generates quantitative estimates of the use and non-use values associated with habitat protection. Participants will practice applying the toolkit with the help of exercises featuring real-world examples of conservation efforts. Space will be limited to 15 participants. Airfare, lodging and meals will be covered. For more information contact Ms. Anna McMurray at [AMcMurray@defenders.org](mailto:AMcMurray@defenders.org)

### **World Environmental & Water Resources Congress 2008**

May 12-16, 2008, Honolulu, Hawaii

The 2008 World Environmental & Water Resources Congress will focus on sustainability issues related to water resources and the environment in 18 technical tracks covering local, national and global issues, with special focus on the Pacific Rim Region. This Congress has become an important annual opportunity for the best minds at work in water and environmental fields to convene and focus on key topics of today. In this time of climate changes and shifting resources, it is vital that those working at the forefront of our professions share their ideas and insights from research and experiences in the field, to generate the best practices for the future. More information available at: <http://content.asce.org/conferences/ewri2008/>

### **Hawaii Riparian Workshop**

May 20-22, 2008, Kaneohe, Hawaii

Degradation of streams, riparian areas, and their associated functions and processes has been and continues to be a significant problem within the island chain. A workshop has tentatively been scheduled for May 2008. This workshop will bring together interested parties in the Hawaiian island chain to improve the restoration and management of streams and their associated riparian areas. Save the date. For more information or to register contact Dr. Richard A. Fischer at [Richard.A.Fischer@usace.army.mil](mailto:Richard.A.Fischer@usace.army.mil).

### **Society of Wetland Scientists 29<sup>th</sup> Annual Meeting “Capitalizing on Wetlands”**

May 26 – 30, 2008, Washington DC

Meeting presentations and discussions will highlight the need for integrating the breadth of wetland science, encompassing biogeography, conservation, ecology, hydrology, management, nutrient cycling and contamination, and wildlife biology with economics, public policy, and education. Wetland functions and values confer upon them capital. Understanding and communicating the nature of this capital will be critical to making decisions at local to global levels about the management, protection, and fate of the world's wetlands. More information available at: [http://www.sws.org/2008\\_meeting/index.html](http://www.sws.org/2008_meeting/index.html)



### **2008 American Water Resource Association Summer Specialty Conference**

June 30 - July 2, 2008, Virginia Beach, Virginia

Riparian Ecosystems & Buffers will be the focus of this year's summer conference. In 2000, the American Water Resources Association began hosting Riparian Specialty conferences on a four year interval. These highly successful conferences have built a solid foundation of knowledge about the critical riparian landscape while providing an invaluable opportunity for networking among scientists and the managers who are implementing riparian programs and practices on the ground. The 2008 Conference will continue to build on this successful history. For conference information and how to submit abstracts, visit:

[http://www.awra.org/meetings/Virginia\\_Beach2008/abstracts.html](http://www.awra.org/meetings/Virginia_Beach2008/abstracts.html)

### **Association of State Wetland Managers – 2008 Conference “Wetlands and Global Climate Change”**

September 16 – 18, 2008, Portland, Oregon

Plans are underway for Wetlands 2008, ASWM's annual conference. Global climate change will be the primary topic, including carbon sequestration and wetlands, sea level change, and strategies for managing wetlands in response to long term changes in temperature and precipitation. Other related topics will include wetland research priorities, monitoring trends in wetlands and related resources, management strategies, invasive species, biodiversity and policy responses to a changing environment. The purpose of this symposium is to describe challenges, identify opportunities, and share cooperative strategies for protecting, restoring and conserving wetlands in response to climate change. More information available at:

<http://www.aswm.org/index-alt.htm#meetings>

### **4<sup>th</sup> National Conference on Coastal and Estuarine Habitat Restoration**

October 11-15, 2008, Providence, Rhode Island

The Conference Program will address all aspects of coastal and estuarine habitat restoration, in all habitats and at all scales. Habitat restoration - manipulation of the physical, chemical or biological characteristics of a site with the goal of returning self-sustaining natural or historic structure and functions to former or degraded habitat – offers great promise for reversing trends of habitat loss and degradation and is a crucial component of comprehensive ecosystem restoration, protection and management. More information available at:

[www.estuaries.org/conference](http://www.estuaries.org/conference)

### **The Wildlife Society 15th Annual Conference**

November 8-12, 2008, Miami, Florida

The conference is an excellent opportunity to learn and debate cutting-edge research, management practices, and policy issues. A variety of workshops will provide hands-on training in new management techniques. It's also a great place to network among 1,500 wildlife biologists from across the U.S., Canada, the Caribbean, and worldwide. Call for Contributed Papers and Posters: deadline March 14, 2008. More information available at:

<http://joomla.wildlife.org/Miami08/>

## Grants

### **EPA 2008 Wetlands Program Development Grants**

**Deadline: March 25, 2008**

Wetland Program Development Grants (WPDGs) provide eligible applicants an opportunity to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. While WPDGs can continue to be used by recipients to build and refine any element of a comprehensive wetland program, proposals that address one or more of the national priorities (Regulation-Enhancing Wetland Protection and/or Monitoring and Assessment) and/or regional priorities identified in Section I may increase their chances of being selected for award. Awards will range from \$50,000 to \$300,000 per project. States, tribes, local government agencies, interstate agencies, and intertribal consortia are eligible. More information available at: <http://www.epa.gov/region09/funding/wetlands-08.html>

### **EPA Broad Agency Announcement for Conferences, Workshops, and/or Meetings**

**Deadline: June 5, 2008; and December 9, 2008 (multiple deadlines)**

This funding opportunity provides funds for the planning, arranging, administering and/or conducting of conferences, workshops, and/or meetings that focus on research to protect human health and safeguard the environment. Specifically, EPA is interested in supporting scientific and technical research conferences that address: (1) human health; (2) ecosystems; water and security; (3) economics and sustainability; (4) air and global climate change; and (5) technology. This Broad Agency Announcement is open from December 10, 2007 through December 9, 2008. Applications must be received by January 7, 2008; June 5, 2008; and December 9, 2008. State agencies, City agencies, universities, non-profits are eligible to apply for funding. No matching component is required. More information available at: [http://es.epa.gov/ncer/rfa/2008/2008\\_baa.html](http://es.epa.gov/ncer/rfa/2008/2008_baa.html)

### **American Forests ReLeaf Program Grants**

**Deadline: July 1, 2008**

Grant RFP aimed at projects involving partnerships with private and public sector organizations and agencies to plant trees and improve the environment in projects that would otherwise not be feasible. American Forests supports projects that plant the right trees in the right places for the right reasons. Proposals for cost-share Global ReLeaf Forest grants are to cover costs generally associated with the planting of seedlings (i.e. site preparation, seedling purchase, contracting, transportation, shelters, etc). Plantable area is 20 acres or larger or has the potential to be 20 acres or more. More information available at: [http://www.americanforests.org/global\\_releaf/grants/](http://www.americanforests.org/global_releaf/grants/)

### **Atherton Family Foundation Grants**

**Deadlines: Rolling Deadline**

The Foundation makes grants for programs and projects that benefit the people of Hawai'i. The fields of greatest interest are arts, culture and humanities; community development; education; environment; health; human services; spiritual development; and youth

development. Applicants must have 501(c)(3) status or must apply through a fiscal sponsor with 501(c)(3) status. Grants have a one year time frame. No match is required and first time applicants are encouraged to submit grants under \$50,000.00.

More information available at: <http://www.hawaiicommunityfoundation.org/atherton/>

### **Pikake Fund**

#### **Deadlines: Rolling Deadline**

The Pikake Fund provides support for film or video projects on environmental protection efforts. Grant-making only occurs in even numbered years. Funds have been granted for 2006. Proposals for the next grant round will be accepted after January 30, 2008.

More information available at: <http://www.hawaiicommunityfoundation.org>

## **Resources for finding funding**

The University of Hawaii has a general list of grant making agencies and foundations at: [http://www.hawaii.edu/emailref/internet\\_resources/Foundation\\_and\\_Grant.html](http://www.hawaii.edu/emailref/internet_resources/Foundation_and_Grant.html)

The Hawaii Community foundation provides information on Hawaii based grant opportunities at:

<http://www.hawaiicommunityfoundation.org/>

Grants.gov provides a nexus to find and apply for federal funding opportunities. Their e-mail notification is a great way to keep up to date on grant opportunities:

<http://www.grants.gov/>